

- palm to unite with radial artery to form ~~deep~~ volar arch.
- superficial - crosses palm to unite with branch of radial to form superficial volar arch.
- Pressure points - sub-clavian
  - half way along clavicle.
  - anella.

## Veins & lymph.

2 groups - deep & superficial.

- deep - follow arteries (accompanying veins) venea comitantes except sub-clavian & axillary.
- Axillary vein - same extent as artery
  - receives 2 superficial veins.
- Basilic      Median antecubital - down arm  
Cephalic - through literally.
- Sub-clavian - from outer border of 1<sup>st</sup> rib
  - to sterno-clavicular joint.
  - unites with internal jugular to form innominate - to right atria of heart (vena cava)

Superficial - rises dorsal venous network.

- Cephalic - passes up radial side of forearm, up arm along lateral border of biceps. Goes between Deltoid & Pectoralis.

Major Branches - empties into axillary vein just below clavicle.

begins at ulnar side of dorsal venous network - passes up posterior & ulnar side of forearm posteriorly & along medial border of biceps. At middle of arm pierces deep fascia to lie beside the brachial artery, to empty into axillary vein.

Anastomosis - Median Cubital

- unites <sup>①</sup> Basilic + <sup>②</sup> Cephalic veins.

Median Anti - Brachial.

## Lymph

Derived from blood plasma.

- pale, straw-colored.

All tissues bathed in it.

- is tissue fluid.

- is collected by lymph vessels.

- contain lymphatic nodes & glands.

- carries lymphocytes.

- begin in minute vessels in inter-cellular spaces.

Channels increase in size &

- anastomose freely, lying mostly in superficial fascia.
  - at certain points - glands (elbow & axilla)

Glands - act as filters.

Bacteria - attacked in glands by phagocytes

Lymph - from rt. side of head, thorax & rt. arm empty - rt. innominate vein

" - from rest of body discharge into thoracic duct & then rt. innominate vein.

Thoracic duct:

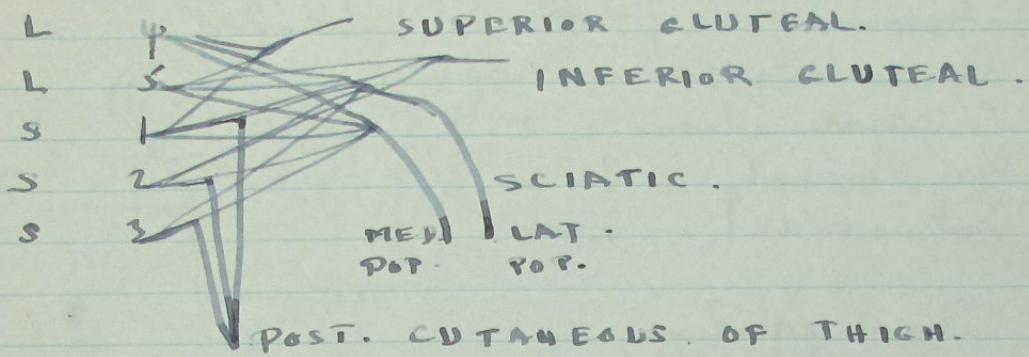
- passes up thoracic vertebrae - (front of bodies) - cisterna chyli between 1 & 2 n. (small heart.)
- up & through diaphragm, up to 7<sup>th</sup> vertebra (cervical)

Anilia - 20-30 lymph glands.

Flow of lymph in resting muscles - slow.  
During muscular exercise & massage flow increased.

- depends on pressure
- during digestion - blood altered

## SACRO PLEXUS.



## Arteries of Lower Extremity

lumbosacral joint. 4-5 lumbar.

descending aorta - cause

Common iliac 2 + 1.

lumbosacral joint

Int. + ext. iliac.



Int. iliac artery

- goes to gluteal region - buttock.
- + to true pelvis. (muscles & skin)

Ext. iliac artery

- enters thigh under inguinal lig.
- mid-way between ant. sup. iliac spine + symphysis pubis -

Becomes femoral artery.

Femoral artery

↑ In femoral Δ (Scarpas Δ)

Passes down thigh under sartorius

1st. superficial to adductor longus

+ then on tk of adductor magnus

2/3 down opening in adductor magnus  
insertion then to back of knee joint to

Popliteal artery

1) Branch - femoral profunda.

- 4 perforating arteries pass to  
back of thigh + nourish it.

Popliteal artery

- from tending in adductor magnus  
to lower border of popliteus muscle.

- 5 genicular arteries - anastomosis at

### Popliteal artery

- divides into Ant. Tibial A.  
Post. Tibial A.

### Ant. Tibial A.

- goes through interosseous to leg  
 where it descends to ankle joint  
 to Dorsalis Pedis A.

### Post. Tibial A.

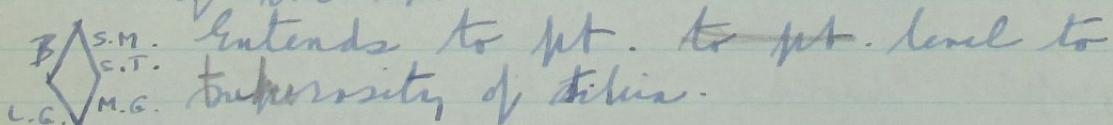
- straight down back of leg, curves  
 medially under Fascia retinaculum  
 to back side of foot where it  
 divides into medial & <sup>lateral</sup> plantar arteries

med. malleolus.  
 calcaneus.  
 tibia - fibula

### Surface anatomy of A.

With thigh flexes, abducts + abd.  
 rotated - pul femoral A. at  
 mid - inguinal pt. to adductor  
 tubercle

Popliteal A. - from med. to proximal L  
 of the space

  
 B / S.M. C.T. M.G. extends to pt. to pt. level to  
 tuberosity of tibia.

Post. tib. A. - begins when popliteal ends  
 + extends to a pt. mid-way  
 between tip of medial malleolus  
 + post. end of calcaneus.

Ant. tibial A.

Extends from pt. just distal & lateral to tuberosity of tibia to pt. midway between tips of malleoli.

Branch of Post-tibial A.

Peroneal A. lateral back of leg.

### Veins of Lower Extremity

Deep veins accompany A. & some name superficial " <sup>down of</sup> ~~down of~~

Long Saphenous V. (Phlebitis)

Begins at medial side of foot  
passes up in front of med. malleolus.  
behind med. condyle of femur.  
Winds - breadth radial to patella.  
empties into femoral A.

Short Saphenous V.

lateral side of foot. ascends back  
of leg to enter into Popliteal Vein.

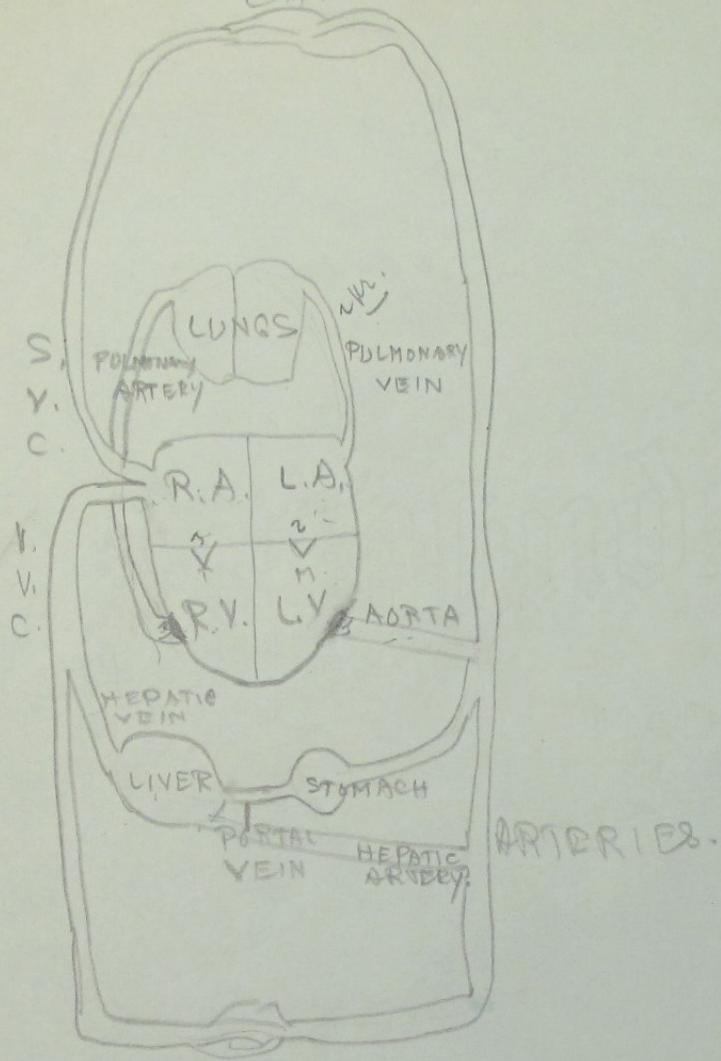
### Lymph Glands

- 6 - 7 lymph glands at back of knee.
- 12 - 20 - inguinal region.

Nerves - follow course of long saphenous  
to inguinal region.

- follow course of short s. v.  
to back of knee joint.

CAPILLARIES.



①

## PoHil circulation

Through liver, loses glucose, directly from digestive system.

## Disorders of blood system

Anemia, high blood pressure,  
leakage of heart, haemophilia.

## Blood pressure

diet, thyroid, moderate exercise (outdoor)

Fluids of body - 88%  
lymph.

Blood - venous - impure - to heart.  
arterial - pure - to body.

Functions of blood.

- supplies food
- respiratory
- excretory
- protective - toxins - vaccines
- maintains liquid content
- maintains body temperature

Blood - 5% of body wt.

- salt + minerals
- digested foods
- wastes

Cells - red + white corpuscles.

Plasma contains amino acids

Fibrinogen - causes blood to clot

- wastes from body metabolism

Red blood corpuscles.

- like buttons
- 3000 in 1"

Anemia - too few red corpuscles

decrease - rise in tempr

spleen - stores them

high altitude produces more  
of them

Nasoga - bronchi, bronchides - air sacs.



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